

Remarks

The Office Action mailed October 10, 2003 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-28 are pending in this application. Claim 1 stands rejected. Claims 2-12 stand objected to. Claims 13-28 are allowed.

The rejection of Claim 1 under 35 U.S.C. § 103 as being unpatentable over Peters et al. (U.S. Patent No. 4,467,651) in view of Brooks (U.S. Patent No. 6,179,067) is respectfully traversed.

Peters et al. at Column 4, lines 9-19 describe the modeling of calibration coefficients (i.e., A_1 , A_2 and A_0) for selected operating conditions (e.g. temperature) of an accelerometer. Specifically, the coefficients are determined so that the algorithm gives the best approximation of the input acceleration over the full input range. The set of coefficients is determined from the calibration of the instrument at several discrete temperatures in the operating range of the accelerometer. However, Peters et al. do not describe determining a corrected accelerometer output based upon an estimation of bias accumulation.

Brooks describes a method for determining magnetometer errors during wellbore survey operations. In one portion of the method, a magnetic survey probe is placed in a calibrated precision stand in a magnetically clean environment with a reference probe alongside. The stand is then moved through a series of positions with inclinations ranging from near-vertical north to approximately horizontal east, with a wide range of toolface angles. A correction algorithm is used to estimate scale factor and bias values for each accelerometer and magnetometer axis. While Brooks provides bias values for each accelerometer axis, Brooks does not describe, nor suggest, estimating bias accumulation from measured accelerometer outputs.

Independent Claim 1 recites a method for determining compensation coefficients for accelerometers. The method comprises "estimating bias accumulation from measured accelerometer outputs," "determining a corrected accelerometer output based on the bias accumulation estimate" and "determining the compensation coefficients using the corrected accelerometer output."

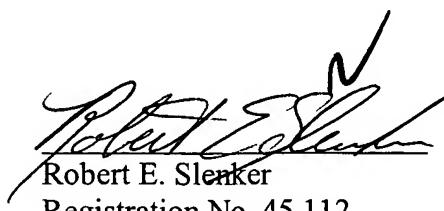
Peters et al. in view of Brooks do not describe nor suggest estimating bias accumulation from measured accelerometer outputs and determining a corrected accelerometer output based on the bias accumulation estimate.

For the reasons set forth above, Claim 1 is submitted to be patentable over Peters et al. in view of Brooks. For the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claim 1 be withdrawn.

The objection to Claims 2-12 is respectfully traversed. Claims 2-12 depend, directly or indirectly, from independent Claim 1 which is herein submitted to be patentable. For the reasons set forth above, Applicant requests that the objection to Claims 2-12 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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